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UTILITY

Attornev Docket No. 10 T. 100

UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 C.F R. § 1.53(b))

First Inventor or Application Identifier Maury E. Collett II

Clip for Securing Electrical

Express Mail Label No. E318905155US

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.		Assistant Commissioner for Patents ADDRESS TO: Box Patent Application Washington, DC 20231				
	Fee Transmittal Form (e.g., PTO/SB/17)	Microfiche Computer Program (Appendix)				
l — `	Submit an original and a duplicate for fee processing)	6. Nucleotide and/or Amino Acid Sequence Submission				
	pecification [Total Pages 9] referred arrangement set forth below)	(if applicable, all necessary)				
	Descriptive title of the Invention	a. Computer Readable Copy				
l	Cross References to Related Applications	b. Paper Copy (identical to computer copy)				
ŧ	Statement Regarding Fed sponsored R & D					
i e	Reference to Microfiche Appendix	c. Statement verifying identity of above copies				
i	Background of the Invention Brief Summary of the Invention	ACCOMPANYING APPLICATION PARTS				
ł	Brief Description of the Drawings (if filed)	7. Assignment Papers (cover sheet & document(s))				
1	Detailed Description	8. 37 C.F.R.§3.73(b) Statement X Power of (when there is an assignee) X Attorney				
-0	Claim(s)	9. English Translation Document (if applicable)				
	Abstract of the Disclosure	Information Disclosure Conies of IDS				
3. X Dr	rawing(s) (35 U.S.C. 113) [Total Sheets 1]	Statement (IDS)/PTO-1449 Citations				
4. Oath or	Declaration [Total Pages 2]	11. Preliminary Amendment				
а.	X Newly executed (original or copy)	12. X Return Receipt Postcard (MPEP 503) (Should be specifically itemized)				
b. \	Copy from a prior application (37 C.F.R. § 1.63	* Small Entity Statement filed in prior application				
_	(for continuation/divisional with Box 16 completed) DELETION OF INVENTOR(S)	13. X Statement(s) Status still proper and desired				
	Signed statement attached deleting	Certified Copy of Priority Document(s)				
	inventor(s) named in the prior application see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b)	n, (if foreign priority is claimed)				
* NOTE FOR	TITEMS 1.& 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTIT					
	ALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEP ED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).					
16. If a CC	ONTINUING APPLICATION, check appropriate box, and	supply the requisite information below and in a preliminary amendment:				
C	Continuation Divisional Continuation-in-part	. , , , , , , , , , , , , , , , , , , ,				
	oplication information: Examiner UATION or DIVISIONAL APPS only: The entire disclosure	Group / Art Unit:e of the prior application, from which an oath or declaration is supplied				
under Box 4	b, is considered a part of the disclosure of the accompa	nying continuation or divisional application and is hereby incorporated by				
reterence. T		n has been inadvertently omitted from the submitted application parts.				
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Signatur	re / June / Vack	Date July 31, 2000				

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DESCRIPTION

WIRING CLIP FOR SECURING ELECTRICAL WIRING TO A FRAMING MEMBER

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Field of the Invention

The present invention relates generally to a wiring clip, and more particulary to a wiring clip for securing electrical wiring to a metal framing member.

Background of the Invention

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The National Electric Code specifies that electrical wiring be positioned a defined safe distance (1 1/4 inches) from the nearest edge of a framing member. The code requirement is found in Article 300, Section 300-4(d) N.E.C. If such spacing can not be maintained, the electrical wiring has to be protected by a 1/16 inch thick steel plate or sleeve. The purpose of the code requirement is to prevent fasteners, intend to be driven into the face of the framing member to secure the wall board to the framing member, from piercing or otherwise damaging the electrical wiring.

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A present practice is to staple electrical wiring to the major flat side of a wood framing member. While the method is suitable for single wires, this becomes a particular problem for multiple wires, where the wires should be stapled one on top of the other to maintain the proper distance from the nearest edge of the framing member. Additionally, with the increasing usage of metal studs as framing members, the stapling of the electrical wires to metal framing member is difficult and may not provide adequate support for the electrical wiring.

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Therefore, a need exists in the industry for a wiring clip capable of securing one or more electrical wires to a metal framing member efficiently and effectively. It would be desirable for the wiring clip to be compact, lightweight, and easy to install.

Brief Summary of the Invention

The present invention relates to a method and apparatus for securing electrical wiring to a metal framing member. A wire clip in accordance with the subject invention can have an open frame having a wire receiving area formed in the main body. The wire receiving area can be centrally located within the main body. The wire clip can be generally of U-shaped configuration, with two arms being joined to the main body. The end of the first arm can be bent to form a J-hook, such that the J-hook can be hooked about a first inner edge of a metal framing member. The end of the second arm can comprise a bent portion which can be secured about a second inner edge of the metal framing member. The arms, as well as the main body, can be flexible, such that the arms and the main body will embrace the metal framing member.

In a method of use, one or more electrical wires can be positioned with respect to the framing member prior to the installation of the wiring clip. The electrical wiring can then be secured in the proper longitudinal location on the metal stud by securing the J-hook of the subject wiring clip at the end of the first arm about the first inner edge of the metal framing member and moving the subject wiring clip over the metal framing member, positioning the electrical wiring within the wire receiving area. The wiring clip can then be secured to the metal framing member by slipping the end of the second arm around the second edge of the metal framing member.

In an alternative embodiment, a wiring clip in accordance with the subject invention can be secured to the metal framing member and then the electrical wire(s) can be positioned in the wire receiving area of the wiring clip. After the placement of the wire(s) in the receiving area, preferable the wire(s) are secured in place by a receiving area closure means.

An alternative method of securing electrical wiring to a framing member can involve the positioning of the subject wiring clip to the framing member and then threading the electrical wiring through the wire receiving area. The wire receiving area can have smooth edges so as to not cut the insulation on the electrical wiring.

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The wiring clip can be further secured to the framing member by means of a secondary attachment device, such as a screw or other similar means. To secure, a screw can be driven through, for example, the first and/or second arm and into the metal stud.

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Brief Description of the Drawings

Figure 1 is a perspective view of a wiring clip in accordance with the present invention.

- Figure 2 is a top view of a wiring clip in accordance with the present invention.
- Figure 3 is a top view of a specific embodiment of the present invention.

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- Figure 4 is a top view of the of an embodiment of the subject wiring secured to a metal framing member.
- Figure 5 is a top view of the clip end of the clip of the present invention being secured about a metal framing member.
- Figure 6 is a bottom view of the clip of the present invention being secured to the metal stud with a screw.

Detailed Disclosure of the Invention

Referring to Figures 1 and 2, an embodiment of the subject wiring clip 10 generally resembles an open frame having a wire receiving area 12 formed in the main body 14, where the wire receiving area 12 is centrally located within the main body 14. Although centrally locating wire receiving area 12 is preferred, a non-centrally located wire receiving area can also be utilized. The wire clip 10 shown in Figures 1 and 2 has a generally U-shaped configuration, with two arms 16 and 18 being joined to the main body 14. The end 20 of the first arm 16 is bent to form a J-hook 22, such that the J-hook 22 can be hooked about a first inner edge 42 of a metal framing member. The end 24 of the second arm 18 can be bent such that it can be slipped around a second inner edge 44 of the metal framing member. As such, end 24 can be removably secured about the second inner edge 44 of the metal framing member. The arms 16 and 18, as well as the main body 14, are preferably flexible, such that the arms 16 and 18 and the main body 14 can embrace the metal framing member. For

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example, the subject wiring clip 10 can be made of spring steel or other metals. Alternatively, the subject wiring clip 10 can be made from a flexible plastic or other appropriate material.

In a preferred embodiment, the wiring clip 10 is dimensioned to fit about a two-byfour metal framing member.

In an additional embodiment, as shown in Figure 3, a material 28 can be affixed within the wire receiving area 12. Material 28 can be resilient such as to increase the compressive force between the wiring and the framing member, more securely securing the wiring against the metal framing member. For example, material 28 can be foam, rubber, or other similar materials. Material 28 can also be located along the sides of the wire receiving area to reduce the risk of cutting the wiring by the subject wiring clip.

In a preferred method of use, the wiring is positioned with respect to the framing member prior to securing the wiring clip 10 to the framing member. As shown in Figures 4 and 5, the wiring can then be secured in the proper location on the metal framing member by securing the J-hook 22 at the end 20 of the first arm 16 about the first inner edge 42 of the metal framing member. The wiring clip 10 can then be positioned over the metal framing member such that the electric wiring is within the wire receiving area 12. The wiring clip 10 can then be secured to the metal framing member by clipping end 24 of the second arm 18 about the second inner edge 44 of the metal framing member. The end 24 permits the wiring clip 10 to be removably attached to the metal framing member, such that the wiring clip 10 can be temporarily removed from the metal framing member 40 to, for example, install additional wiring. If desired, the wiring clip 10 can be further secured by crimping the end 24 of the second arm 18 to match the contours of the second inner edge 44 of the metal framing member.

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Preferably, sides 16 and 18 are thin enough so as to not impair proper placement of dry wall, or other covering material, onto the sides of the metal framing members. In addition, it is preferable that sides 16 and 18 allow drywall screws, or other covering fastening screws, to easily penetrate through sides 16 and 18 and into the side of the framing member. In a specific embodiment, as shown in Figure 4, the wiring clip 10 can be further

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secured to the framing member by means of a secondary attachment device, such as a screw or other similar means. To secure, a screw can be driven through, for example, the first arm 16 and/or the second arm 18 and into the metal framing member. Preferably, the protrusion of the secondary attachment device should be such as to not interfere with proper placement of dry wall, or other covering material, onto the sides of the metal framing members.

Referring to Figure 6, a specific embodiment of the subject wiring clip is shown wherein the wire receiving area opens outward such that the wiring can be placed into the wire receiving area after the wiring clip is attached to the framing member. Alternatively, in this embodiment the wiring can be secured in the wire receiving area prior to securing the wiring clip to the framing member. As shown in Figure 6, once a wire is positioned in the wire receiving area 12, sides 46 and 48 can be pushed toward each other and snapped together so as to secure the wire within the wire receiving area. As needed, the snap mechanism holding sides 46 and 48 together can be a one-time snap or can be an open-and-close snap. Also, other closure mechanisms can be used. For example, friction can be relied on to hold the wiring between sides 46 and 48. Preferably, the wiring clip of Figure 6 can be made of a flexible plastic or other appropriate material.

It should be understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and the scope of the appended claims.

<u>Claims</u>

1	1. A wiring clip for securing wiring to a metal framing member having a face and
2	two sides, comprising;
3	a) a main body;
4	b) a wire receiving area adjacent the main body;
5	c) a first arm located at a first end of said main body, wherein said first arm
6	comprises a first attachment means for attaching said first arm to a first side of a framing
7	member;
8	d) a second arm located at a second end of said main body, wherein said second
9	arm comprises a second attachment means for attaching said second arm to a second side of
10	the framing member, wherein when said first arm and said second arm are attached to sides
11	of the framing member, wiring positioned within the wire receiving area is secured to the
12	framing member.
1	2. The wiring clip according to claim 1, further comprising a wire compression
2	member within said wire receiving area, wherein said wire compression member compresses
3	electric wiring located within said wire receiving area against the framing member when said
4	wiring clip is attached to the framing member.
1	3. The wiring clip according claim 2, wherein said wire compression member
2	comprises a substantially resilient material.
1	4. The wiring clip according to claim 3, wherein said wire compression member is
2	made of a material selected from the group consisting of: foam material and rubber material.
1	5. The wiring clip according to claim 1, wherein said first attachment means
2	comprises a J-hook.

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- 6. The wiring clip according to claim 5, wherein said second attachment means comprises a bend in the second arm which can be slipped around an inner edge of the second side of the framing member.
- 7. The wiring clip according to claim 1, wherein said wiring clip is made of a flexible metal.
- 1 8. The wiring clip according to claim 1, wherein said wiring clip is made of a flexible plastic.
 - 9. The wiring clip according to claim 1, wherein said wiring clip is dimensioned to substantially fit about a two-by-four metal framing member.
 - 10. The wiring clip according to claim 1, wherein said wire receiving area comprises a closure means such that wiring can be secured within the wire receiving area by said closure means.
 - 11. The wiring clip according to claim 10, wherein said closure means comprises a snap mechanism.
 - 12. The wiring clip according to claim 1, wherein said first arm and said second arm are thin enough to not interfere with the attachment of a covering material to the framing member.
 - 13. The wiring clip according to claim 1, wherein said first arm and said second arm allow covering fastening screws to penetrate through.
- 1 14. A method for securing electrical wiring to a metal framing member with a wiring 2 clip, wherein the wiring clip comprises a main body; a wire receiving area; a first arm,

- wherein said first arm is located at a first end of said main body, and said first arm comprises a first attachment means; and a second arm, wherein said second arm is located at a second end of said main body and said second arm comprises a second attachment means; comprising the following steps:
 - a) positioning the electrical wiring along a metal framing member;
 - b) attaching said first attachment means of said first arm to a first inner edge of a metal framing member;
 - c) moving said wiring clip over the metal framing member such that the electrical wiring is positioned within said wire receiving area;
 - d) attaching said second attachment means of said second arm to a second inner edge of the metal framing member.
 - 15. The method for securing electrical wiring to a metal framing member with a wiring clip according to claim 11, further comprising the step of securing said wiring clip to the metal framing member with a secondary attachment means.

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Abstract of the Disclosure

The subject invention pertains to a wiring clip for securing electrical wiring to metal framing members. In a specific embodiment, the subject clip can secure the wiring a required distance from the nearest edge or face of the metal framing member to which a wall board is to be secured. The wire clip generally resembles an open frame having a wire receiving area formed in the main body, where the wire receiving area is centrally located within the main body. The wire clip is generally of U-shaped configuration, with two arms being joined to the main body. The end of the first arm is bent to form a J-hook, such that the J-hook can be hooked about a first inner edge of a metal stud. The end of the second arm comprises a clip, such that the clip can be removable, secured about the second inner edge of the metal stud. The arms, as well as the main body, are resilient, such that the arms and the main body will embrace the metal stud.

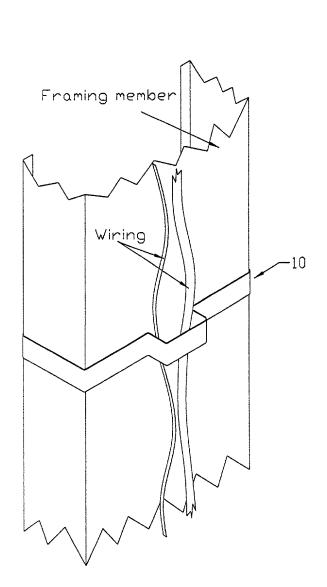


FIG. 5

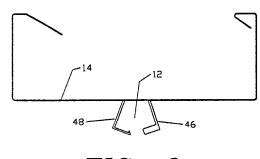
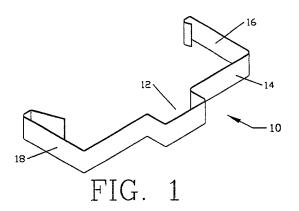


FIG. 6



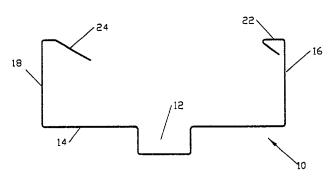


FIG. 2

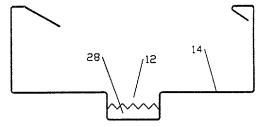


FIG. 3

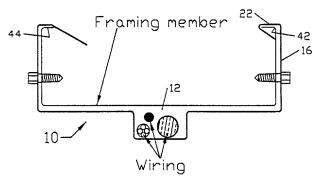


FIG. 4

DECLARATION (37 CFR 1.63) AND POWER OF ATTORNEY

As a below-named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name; and

I believe that I am the original, first, and sole inventor (if only one name is listed below), or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled Wiring Clip for Securing Electrical Wiring to a Framing Member, specification for which

is attache	d hereto.		
☐ was filed		, Serial N	0
I hereby state that I have by any amendment refe		he contents of the above-identi	fied specification, including the claims, as amended
I acknowledge the duty Code of Federal Regula		ich is material to the examinati	on of this application in accordance with Title 37,
or inventor's certificate		dentified any foreign application	nd/or §365 of any foreign application(s) for patent on for patent or inventor's certificate having a filing
Application Serial No.	Country	Filing Date	Priority Claimed
I hereby claim priority	benefits under Title 35, Ui	nited States Code §119 of any	provisional application(s) for patent listed below:
Application			
Serial No.		Filing Date	Priority Claimed
insofar as the subject manner provided by the as defined in Title 37, C	atter of each of the claims of first paragraph of Title 35,	of this application is not disclo United States Code, §112, I ack , §1.56(a) which became availa	Fany United States application(s) listed below and, sed in the prior United States application(s) in the nowledge the duty to disclose material information ble between the filing date of the prior application Status (Patented,
Serial No.		-	Pending, Abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following persons registered to practice before the Patent and Trademark Office as my attorneys with full power of substitution and revocation to prosecute this application and all divisions and continuations thereof and to transact all business in the Patent and Trademark Office connected therewith: David R. Saliwanchik, Reg. No. 31,794; Jeff Lloyd, Reg. No. 35,589; Doran R. Pace, Reg. No. 38,261; Christine Q. McLeod, Reg. No. 36,213; Jay M. Sanders, Reg. No. 39,355; James S. Parker, Reg. No. 40,119; Frank C. Eisenschenk, Reg. No. 45,332; Jean Kyle, Reg. No. 36,987; Seth M. Blum, Reg. No. P-45,489.

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